MINUTES
TEXAS HARMFUL ALGAL BLOOM WORKGROUP
June 25, 2010
10:00 a.m. – 2:15 p.m.

Large Conference Room
Jack Williams Library, Texas A&M Galveston

In attendance were Tony Reisinger (Sea Grant), Jeff Paternoster (NOAA), Lythia Metzmeier (TCEQ), Winston Denton (TPWD), Sammy Ray (TAMUG), Andy Tirpak (TPWD), and Meridith Byrd (TPWD). Teleconferencing in were Lisa Campbell (TAMU), Chris Kolbe (TCEQ), and Rick Stumpf (NOAA).

Dr. Sammy Ray began the meeting with a fascinating presentation on his red tide work in the 1950s and 1960s. Highlights included the proposed use of brevetoxin for chemical warfare in the 1960s and the discovery that collecting *G. breve* samples in brass bottles would result in no cells being found due to the bottles' copper content.

Jeff Paternoster of the NOAA Phytoplankton Monitoring Network gave an update on the PMN's activities. Jeff was visiting the upper Texas coast to conduct some new volunteer trainings and to participate in an offshore trip to the Flower Gardens National Marine Sanctuary. Volunteers now have the options of (1) getting their training via the web and (2) doing quantitative (cell counts) rather than qualitative monitoring. New volunteers send water samples to Jeff, who helps them via the web with plankton identification for QC purposes. Potentially toxic blooms are reported to NOAA for confirmation and, if confirmed, NOAA contacts Meridith. Jeff is planning a south Texas trip next year, contingent upon funding.

Dr. Rick Stumpf of NOAA gave an update on the Texas HAB Bulletins, which NOAA is currently transitioning to operational status. "Operational" status means that there will not be a pause in bulletin production if one of the staff go on vacation.

- Rick and Shelly Tomlinson will remain in their capacities as technical scientific support.
- Bulletin production is moving to NOAA CO-OPS, the same group who produce the Florida bulletins. CO-OPS staff will be undergoing training in early July to forecast Texas blooms.
- Once operational, Rick predicts that the forecasting of bloom transport will be much better, as they will be using Rob Hetland's (TAMU) model.
- In the future NOAA hopes to be able to track Dinophysis blooms and pinpoint which estuaries might be affected.
- Users will not notice a change in the bulletins except for more information in the analysis section.

- Katie Fisher of CO-OPS hopes to visit Texas this summer to meet with users the transition – Meridith is working to set up a meeting.
- Tony Reisinger asked whether offshore currents (including warm and cold core rings) might be included in the bulletins. Rick feels that they could eventually be incorporated but just not this summer, so he will note this as a potential interest for TX users.
- Texas has many more non-Karenia blooms that Florida does, which makes supporting us more difficult, though NOAA is working through the difficulties.
- Resource managers are the only ones eligible to receive bulletins. To do this, submit a request by e-mail to hab-texas@noaa.gov. The public can view archived bulletins on the NOAA website.
- If TexHAB members think the bulletins are important and wish to send letters of support they can contact NOAA at
- NOAA had some available funding that they are using to support Lisa Campbell's Imaging Flow CytoBot (IFCB).

Red Tide Fact Card revision
The group looked over the proposed wording for the fact card, attached at the end of these minutes.

Updates
P. parvum update: Golden alga bloomed throughout the winter and spring in the usual hotspots: Lake Diversion in the Red River basin; Lakes Whitney, Granbury and Possum Kingdom on the Brazos River; Lake E.V. Spence, Moss Creek, Colorado City State Park, and O.H. Ivie on the Colorado River; and the Pecos River at Coyanosa and Brotherton Ranch. Lake Whitney and Possum Kingdom both had fish kills throughout the season. As of mid-April fish kill estimates numbered 51,000 for PK and 69,000 for Whitney.

Dinophysis update: This spring saw a second bloom of the toxic dinoflagellate *Dinophysis*; as in 2008, DSHS was forced to close bays to shellfish harvesting. The bloom occurred very late in the season, so by the time of the closure there was only one week left in oyster season. TAMU's Imaging Flow CytoBot began detecting cells almost 5 weeks in advance and has proven once again to be invaluable to TPWD and DSHS for HAB prediction. No cells have been seen recently. *K. mikimotoi* seen in background concentrations.

Lisa reports that the IFCB is back up and running after a computer failure during the *Dinophysis* bloom. Lisa got MERHAB rapid response funding to repair the computer, which was up and running within a week, though during that time the bloom ended. Everything is running smoothly now. Lisa repeated her offer to the group that she is willing to accept samples for species confirmation using the second IFCB that is in her lab.

Lisa and Rob Hetland are working on an ECOHAB project whose goal is to test the wind index as an indicator for onset of *K. brevis* blooms. Sampling for the project will begin this summer. Rob's postdoc is working on modeling to see if the model can reproduce variation in bloom movement.

6th HAB Symposium: A reminder that the national HAB symposium is scheduled for November 13-17, 2011 in Austin, TX. Lisa and Deana Erdner are looking at the AT&T Center, which is very near the UT campus, as the first choice. They followed up on a suggestion to check out the Capitol as an option, but this doesn't look to be feasible. UT and Texas A&M have both contributed funding and Lisa and Deana continue their fundraising efforts, including submitting a conference grant proposal to NSF. Meridith will ask TPWD or the TPW Foundation for possible funding.

Other updates
The interagency Golden Alga Task Force met on May 25th to discuss the creation of sub committees to the GATF and the progress of the Private Waters Workgroups. There is no funding at this time for outside research projects so there will be no RFPs this fiscal year and most likely none in FY11.

TCEQ Profilers: Chris Kolbe reminded the group that TCEQ maintains water column profilers on Lakes Whitney, Possum Kingdom and Granbury. Dan Roelke (TAMU) has been talking with Jill Csekitz and Pat Bohannon, as he might have a student who can work with the data for a project.

Meridith is due to go on maternity leave for 8ish weeks beginning around Labor Day (or whenever Baby Byrd decides to make his debut) and Lisa was concerned about who should receive reports of HABs. Prior to going on leave, Meridith will designate the appropriate people to contact in her absence.

Next Meeting: The group decided to leave a September meeting up in the air for now. It is possible that there will not be a September meeting and that meetings will pick up again in December. However, if there is a bloom and/or the need for a meeting arises, Meridith will designate the appropriate person to host the meeting in her absence.

Red Tide Fact Card

RED TIDE FACTS:

- In Texas, red tides are caused by high concentrations of a microscopic alga (a plant-like microorganism) called *Karenia brevis* or *K. brevis*. These high concentrations (called blooms) may discolor the water, causing it to appear red, light or dark green, or brown.

- *Karenia brevis* produces a toxin, called brevetoxin, which can affect the central nervous system of fish, birds, mammals and other animals. The most visible result of red tide is dead fish on the beach or floating in the water.

- The cause of red tide is still being investigated, though it is likely always present at low concentrations in the Gulf of Mexico and is believed to have been around for centuries.

- Red tide blooms may last days, weeks or months and can also change daily due to wind conditions.

- Pets can be affected by red tide, so it might be best to keep them away from beaches during a bloom. Inhaling the brevetoxin can cause respiratory difficulties and discomfort for your pet. Dead fish containing the toxin can remain on beaches for weeks or months following a bloom; allowing your pet to consume the dead fish can cause severe illness and sometimes death.

REPORTING RED TIDE

To report fish kills or suspected red tides 24 hours a day, call Texas Parks and Wildlife at 512-389-4848 (Austin) or 281-842-8100 (Houston.) To learn more about red tide and to check current red tide locations go to http://www.tpwd.state.tx.us/hab/.

To request free copies of this card, send an e-mail with your mailing address to redtide@tpwd.state.tx.us.

(SIDE 2)

HEALTH TIPS

- People with respiratory problems may be affected by aerosolized toxins during red tides. If red tide-affected areas cannot be avoided, these individuals should take a short-acting inhaler. If you have symptoms, leave the beach and seek air conditioning. If symptoms persist, consult your doctor.

- Red tide can cause burning eyes and skin irritation. If your skin is easily irritated, avoid red tide-affected water. If you experience irritation, get out of the water and thoroughly wash with fresh water.

- Symptoms common when breathing red tide toxins include coughing, sneezing, and teary eyes. Symptoms are usually temporary. Wearing a particle filter mask may lessen the effects, and research shows that using over-the-counter antihistamines may decrease your symptoms. Check the marine forecast. Fewer toxins are in the air when the wind is blowing offshore.

- Be careful of spines and bones on the beach. Puncture wounds can get infected. Infections appearing after contact with coastal waters should be checked by a doctor. Swimming near dead fish is not recommended since bacteria levels associated with decomposition may be high.

SEAFOOD SAFETY TIPS

- Brevetoxin is heat-stable and is not killed during the cooking process.

- Commercial seafood found in restaurants and grocery stores is strictly regulated and is harvested from waters free of red tide.

- For recreational anglers fishing in red tide-affected waters:
    - Do not eat clams, mussels, whelks or oysters, as they contain toxins that cause a food poisoning called NSP (Neurotoxic Shellfish Poisoning.)
    - Oysters, clams, mussels and whelks can be toxic without any visible sign of red tide.
    - Finfish caught live and gutted can be eaten.
    - Shrimp and crabs are safe to eat. Though these crustaceans are commonly referred to as shellfish, they are not affected by red tide.
    - It is illegal to harvest distressed or dead animals. Do not touch or eat fish floating on the water or washed up on shore.

- Call the Texas Department of State Health Services at 1-800-685-0361 for a 24-hour recording of the status of harvesting areas for oysters, clams, whelks, and

mussels. Additional questions concerning harvesting areas can be addressed to the Austin central office at (512) 834–6757.